



## **Administrative Report**

### **Office of the Manager, Transportation Planning and Development**

**To:** Warden MacDonald and Members of Essex County Council

**From:** Jerry Behl, P.Eng.  
Manager, Transportation Planning and Development

**Date:** Wednesday, October 02, 2024

**Subject:** Road Safety Management Program

**Report #:** 2024-1002-IPS-R22-JB

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#### **Purpose**

The purpose of this report is to provide information on the management of the County road network, specific to road safety, guidelines and regulatory compliance.

#### **Background**

There are numerous requests for safety reviews at locations throughout the County. Resources are directed to respond to requests, as determined by the Director of Infrastructure & Planning Services, in consideration of legislated requirements/compliance, Council direction, best management practices, recommendations from engineers and need.

The County's network of roads has 1084 intersections and 1085 interconnecting segments. To establish a base plan and awareness, the complete network was screened in 2021. The screening process at that time was limited to an analysis of collision data, and only identified opportunities for improvement.

Once the base screening is complete, the next step in managing a large road network involves analysis by a traffic engineer. The engineers apply principles with variables such as: collision data, traffic volumes, traffic speed, road geometry, sight lines and site inspections, all for the purpose of recommending either no change, or improvements.

Regular assessment and analysis of the County road network has identified areas of concern, such as intersection operation, poor visibility, excessive speed and the need for pedestrian facilities. Together, the regular assessment, the numerous requests, and base plan, create an ever-changing list of opportunities of improvement, to which Administration responds. The list continues to change.

Where deemed necessary, properly designed improvements, such as guiderail, signage, and shoulders are examples of generally accepted practices in recognized guidelines. These practices and guidelines "enhance" safety and are the result of continued data analysis, testing, and improvement. As another example, it is known that the use of traffic signals, roundabouts, crosswalks and lighting at intersections can reduce collisions. The process aims to create an environment where human error is less likely to result in severe accidents and promote well-being.

As an example of the type of review Administration carries out, a review for a four way stop or traffic signal typically includes the following:

- Manual traffic counts for 8 hours to determine turning movements
- A site review to check sightlines and geometry
- A review of the collision history checking the number of collisions and trends
- Review of traffic volumes
- Warrant analysis using Transportation Association Canada or Ontario Guidelines
- A memo or report

The work typically requires 3 days of an Engineer's time plus the 8-hour traffic counts. Additional resources are needed if a Council report is required. Infrastructure and Planning Services has one Traffic Engineer. With the limited resources, consultants have been used this year.

Much of this work continues behind the scenes in day to day operations, development reviews and changes to signs and pavement markings, while other changes come before Council for amendments to the Traffic By-law.

As of the writing of this report in 2024, Administration has completed:

- Traffic Control Reviews at 4 locations (4 way stop and traffic signals)
- Intersection Safety Reviews at 5 locations
- Speed Studies at 3 locations
- Pedestrian Crossing Reviews at 4 locations

Administration has managed to complete works in a timely manner, recently however, the volume of enquiry from both Council and the general public has increased. Administration must establish a more robust data acquisition and analysis program in the form of an improved Road Safety Management Program, with an updated baseline, augmented with a priority list of road safety projects with budgets and timelines.

## **Discussion**

The updated Road Safety Management Program will follow these stages:

### **Identify Safety Opportunities (underway)**

A network screening, completed by a specialized consultant, will utilize available collision data, to analyze all road segment links and intersections. This analysis will consider: severity of collisions, traffic volume and predicted collisions based on comparison with similar sites. The outcome of the screening will be a ranked list of locations based on their potential for safety improvement. A screening refresh is recommended on a 5-year cycle.

### **Develop Potential Safety Solutions**

Administration will review the top ranked locations and develop potential safety solutions. After considering human, vehicle, and roadway factors, appropriate countermeasures (safety modifications) will be recommended, such as the addition of traffic signals or speed reductions.

An estimate of economic benefits and costs, associated with the recommended countermeasures will be calculated. Benefits will be based on estimating the reduction in collisions, with costs attributed to fatal, injury, and property damage only collisions. Costs are based on design and construction of the modifications.

### **Select and Implement Strategies**

The improved Road Safety Management program will develop a priority list of projects with budget estimates, and recommended timelines for implementation.

### **Safety Measure Evaluation**

Following implementation of any counter measures, road segments and intersections will be monitored regularly for collisions to assess the effectiveness of the modifications.

The network screening will be completed in November of 2024, and the ranked project list will be completed by the end of 2024. Work on the design

of safety modifications could begin as early as Spring 2025, dependent on approval of an increase to the 2025 budget.

The outcome of this work will be that Administration will have a complete list of intersections and mid-block locations ranked based on safety improvement. The updated list will help Administration to prioritize capital expenditures at locations based on data analysis. Administration will have a more robust method to respond to safety concerns and requests such as: traffic signals, four way stops, and speeding.

While we continue to value input from the community as users of the system, resident concerns are focused on their specific location in isolation. It is the responsibility of Administration to assess locations throughout the County and focus resources where they are most needed.

Administration will be following up with a report in spring 2025 with results of the network screening and priority locations for improvement.

## **Financial Implications**

There are no immediate financial impacts as the cost of work is being carried out within the approved 2024 Road Safety budget. The budget line item for this work is currently under Intersection Safety Improvement, with an allocation of \$100,000 for 2024. This line item is funded through the levy.

For 2025, there is a proposed budget request for an additional \$200,000 under the same line item, but with a revised description to "Road Safety Improvement (Design)" to better capture the full scope of the required work. Additionally, there is a separate \$100,000 reserve funded request in 2025, should the design phase transition into construction.

While the 2025 budget request aims for the program to be partially funded through a contribution from the Rate Stabilization Reserve, the ongoing and increasing demands for road safety improvements could strain reserve funds, which now have target percentages to be maintained. If there is a constant increase in these studies and designs which would lead to more projects, funding will be shifted to the levy to build a stronger base for future work. Council should be aware that agreeing to these additional safety studies could lead to further cost pressures, which may require more consistent levy-based funding to ensure long-term program sustainability.

## **Consultations**

- Hoa Du- Financial Analyst

## Recommendation

That Essex County Council receive report 2024-1002-IPS-R22-JB Road Safety Management Program for information.

## Approvals

Respectfully Submitted,

*Jerry Behl*

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Concurred With,

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<b>Appendix</b>	<b>Title</b>
N/A	N/A